

Application No.: 10/603,444
Amendment dated: May 2, 2005
Reply to Office Action dated: February 1, 2005

AMENDMENTS TO THE SPECIFICATION

On pages 2-3, please replace paragraph [0004] with the following amended paragraph:

[0004] ~~Figure 2 provides~~ Figures 2a-b provide an illustration of a hard drive arm and magnetic head as used in the art. Typically, the magnetic head (slider) 202 is electrically connected to the head gimbal assembly (HGA) by bonding means, such as gold ball bonding (GBB), solder bump bonding (SBB), and ultrasonic welding. Typically, four connection points (balls) 204 are provided to electrically connect the magnetic head 202 to the suspension tongue/head gimbal assembly (HGA) 206. Two of the balls 204 are for the 'read' operation, and two of the balls 204 are for the 'write' operation. To prevent the bonding balls 204 from hardening with the magnetic head 202 in an undesirable orientation, a fixture 208 is used to strongly clamp the suspension tongue 206 and head 202 to be physically stable for ball 204 application by a soldering tool 210, etc. A base support 211 and a first clamping cover 220 stabilize the magnetic head 202. A second clamping cover 221 stabilizes the suspension tongue 206. A second base support (not shown) secures the load beam 212. This fixture 208 is utilized to prevent a change in orientation of the head 202 by the force of the soldering tool 210 during application. However, the clamping force of the fixture 208 is often enough to deform the magnetic head 202 and suspension tongue 212 structure causing improper orientation (alignment). Further, the forces involved have a tendency to damage the head 202 surface as well as the head suspension dimple 214.

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On page 4, please replace paragraphs [0007] – [0012] with the following amended paragraphs:

[0007] ~~Figure 2 provides~~ Figures 2a-c provide an illustration of a hard drive arm and magnetic head as used in the art.

[0008] ~~Figure 3 illustrates~~ Figures 3a-b illustrate a hard drive arm suspension, magnetic head, and head placement device according to an embodiment of the present invention.

[0009] ~~Figure 4 illustrates~~ Figures 4a-d illustrate placement device design according to two different embodiments of the present invention.

[0010] ~~Figure 5 illustrates~~ Figures 5a-d illustrate placement device design according to three additional embodiments of the present invention.

[0011] ~~Figure 6 illustrates~~ Figures 6a-d illustrate placement device design according to three further embodiments of the present invention.

[0012] ~~Figure 7 illustrates~~ Figures 7a-d illustrate placement device design for 'U'-shaped micro-actuator accommodation according to an embodiment of the present invention.

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On page 6-7, please replace paragraph [0018] with the following amended paragraph:

[0018] ~~Figure 7~~ Figure 7a illustrates placement device design for 'U'-shaped micro-actuator accommodation according to an embodiment of the present invention. As shown in **Figures 7b, 7c, and 7d**, in one embodiment, a first vacuum tube 702 has an externally-mounted step 704 and two side-mounted steps 706 to restrict the motion of a magnetic head 708 that is mounted in a micro-actuator, such as a 'U'-shaped micro-actuator 710. This embodiment accommodates the shape of such a micro-actuator 710 while preventing the motion of the head 708 and micro-actuator 710 during the bonding process.